

Upstream Dialogue

Innovation and Technology

In-water training is a mandatory requirement for offshore oil and gas employees. This worker is learning how to use HUEBA, an innovative breathing device that is designed to help him breath underwater in an emergency helicopter situation. [Read more](#)

Offshore Oil

With significant deposits of crude oil, Newfoundland and Labrador is producing over 300,000 barrels of oil per day from three current offshore oil projects – Hibernia, Terra Nova and White Rose. A fourth offshore oil development, Hebron, is expected to begin production by 2017.

► Learn more about the [upstream oil and gas industry in Newfoundland and Labrador](#).

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Innovation and Technology

Learn about a new underwater breathing device that is designed to keep offshore employees safe in an emergency situation. [read more](#)

Stewardship

CAPP is evolving and improving its Stewardship program. Learn more about the five Standards of Practice that have been developed. [read more](#)

Employee Perspectives

Garrett Brown of ConocoPhillips Canada is working on an innovative project that helps the forest grow...faster. [read more](#)

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Industry In the News

B.C. oil and gas stimulus package

August 6, 2009 – The Government of British Columbia announced an oil and gas stimulus package designed to encourage near-term investment in oil and gas activities and to enhance the long-term competitiveness of the province.

The package includes four royalty initiatives and two regulatory initiatives. Royalty initiatives include a one-year, two per cent royalty rate for all wells drilled in a 10 month window (September 2009 - June 2010) and an additional \$50 million allocation for the Infrastructure Royalty Credit Program to stimulate investment in oil and gas roads and pipelines.

The stimulus package is timely for industry considering the dramatic decline in natural gas markets over a short period of time. In the near term, this stimulus package will encourage drilling and related activity in the province, providing employment and maintaining a skilled labour pool.

- ▶ Read the Government of British Columbia [news release](#)
- ▶ Learn more about the royalty initiatives [Oil and Gas Stimulus Fact Sheet](#)

Sulphur emissions reduced 53 per cent since 2000

July 29, 2009 - The Energy Resources Conservation Board (ERCB) issued a report that shows continued sulphur reductions at sour gas plants through 2008. The report outlines improvements and indicates that sulphur emissions have decreased from 2000 to 2008 for both grandfathered acid gas flaring plants (down 75%) and grandfathered sulphur recovery plants (down 52%).

Sulphur recovery guidelines for the province of Alberta were issued in 2001. They established stringent requirements for sulphur emissions, provided a schedule for existing plants to meet the same sulphur recovery requirements as new plants, and encouraged operators to take early action to improve performance. A progress report on industry's compliance with the ERCB guidelines is issued annually.

- ▶ Read the ERCB [news release](#)
- ▶ Read the report, [Sulphur Recovery and Sulphur Emissions at Alberta Sour Gas Plants \(ST 101\)](#)

“Economic Impacts of the Petroleum Industry in Canada”

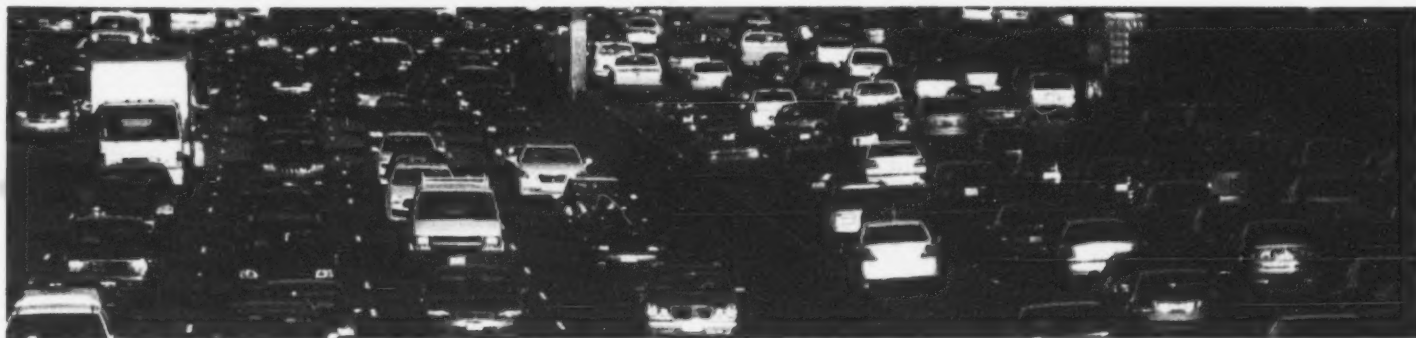
July 2009 - The Canadian Energy Research Institute (CERI) released a report entitled “Economic Impacts of the Petroleum Industry in Canada.”

CERI conducted a comprehensive assessment of the role of the petroleum industry in the provincial and national economies, currently and 25 years into the future. The primary objective of this study was to measure the incremental impacts of development in the oil and gas industry and the corresponding impacts on Canada and each of its provinces and territories.

“The CERI economic impacts study quantifies the cross-country trend we have been seeing as the oil and gas industry continues to provide employment using a wide variety of businesses across Canada. This study demonstrates how the oil and gas sector helps drive the Canadian economy and also provides revenues to provincial and federal governments,” said Greg Stringham, CAPP Vice President, Oil Sands and Markets.

- ▶ Read the [CERI news release](#) that includes a link to the report.
- ▶ Learn more about the [national economic contribution](#) of the oil and gas industry
- ▶ Read Calgary Herald Article, [“Oil Patch Called Key to Canada’s Future”](#)





Industry In the News (continued)

Oil sands emissions compare to other crudes

July 23, 2009 – The Alberta Energy Research Institute (AERI) released a report based on two independent studies that found direct emissions from oil sands crude are comparable with other U.S. crudes when the full life-cycle is considered. The full life-cycle includes emissions released during the production, transportation, refining, and consumption of crude oil.

The *Life-Cycle Analysis of North American and Imported Crude Oils* is the first robust comparison of domestic, imported and oil sands crude processes in U.S. refineries. The research was conducted by U.S.-based consulting companies Jacobs Consultancy and TIAx LLC, with funding from AERI.

The study findings are an important step forward in demystifying the environmental impact of oil sands compared to other sources of oil.

- Read the Alberta Energy Research Institute [news release](#)
- Read the report, [The Life-Cycle Analysis of North American & Imported Crude Oils](#)
- Learn more about the [impact of oil sands development on the environment](#)
- Read National Post article, ["Oil sands less dirty than thought, Alberta study finds"](#)

Venting of solution gas increases in 2008

June 30, 2009 - The Energy Resources Conservation Board (ERCB) released a report that shows flaring of solution gas dropped 5.8 per cent in 2008, whereas venting of solution gas increased 20.1 per cent in the same period. Although the total amount of solution gas vented per facility is small, the percentage increase in venting is attributed to growth in the number of new crude bitumen wells that produce small volumes of solution gas. Despite the recent increase, the volume of solution gas vented has been reduced by 41 per cent since 2000.

The issue is being addressed by the Clean Air Strategic Alliance (CASA) Flaring and

Venting Project Team, a group composed of stakeholders from environmental groups, the petroleum industry, the ERCB, Alberta Energy, Alberta Environment and other government agencies. CASA is developing a number of recommendations for regulatory changes.

Flaring is the burning of natural gas that cannot be conserved. Venting is the release of natural gas into the atmosphere. Solution gas is natural gas produced in association with crude oil and bitumen production.

- Read the ERCB [news release](#)
- Read the report, [ST60B-2009: Upstream Petroleum Industry Flaring & Venting Report](#)

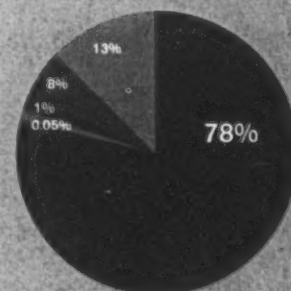
MYTH vs FACT

MYTH: The oil and gas industry is the largest contributor of greenhouse gases derived from oil.

FACT: A life-cycle analysis of crude oil revealed that the majority of oil-related GHG emissions come from vehicle use, not from exploration or production. In fact, 78 per cent of greenhouse gases from oil are produced by vehicle engine combustion.

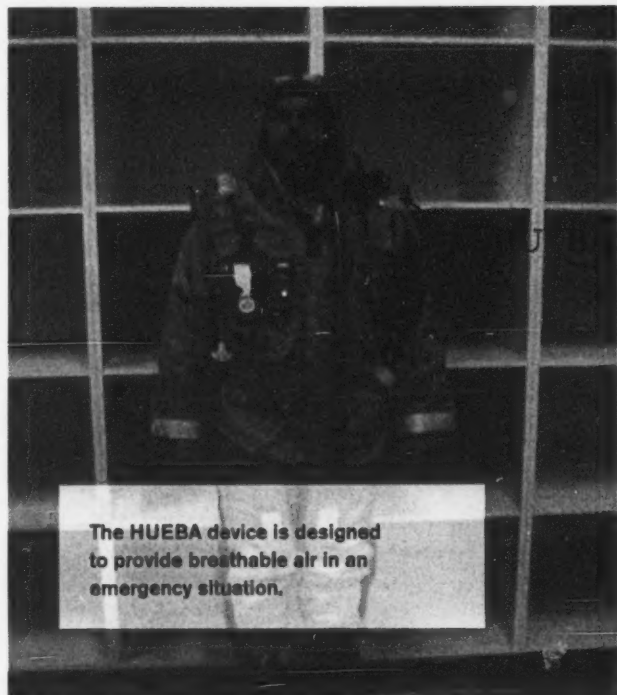
- Source: [The Life-Cycle Analysis of North American and Imported Crude Oils](#)

Greenhouse Gas Contributions (Crude Oil)



- 0.05% Product Transport
- 1% Transportation
- 8% Production
- 13% Refining
- 78% Vehicle Use





The HUEBA device is designed to provide breathable air in an emergency situation.



Photo Courtesy of Helly Hansen

Innovation and Technology

Breathing safe offshore

The offshore oil and gas industry in Atlantic Canada operates in a challenging environment. The remoteness of offshore workplaces and harsh weather conditions are some of the challenges the industry works to overcome to ensure the safety of offshore workers.

The Atlantic Canadian offshore petroleum industry has implemented a new, mandatory safety device designed for use by oil and gas employees who travel by helicopter offshore.

The Helicopter Underwater Emergency Breathing Apparatus (HUEBA) gives the user an additional access

to breathable air so that he or she has more time to escape from a partially or totally submerged helicopter in an emergency situation.

"Safety is the industry's top priority," said Paul Barnes, CAPP's Manager, Atlantic Canada.

"The industry is always looking for ways to improve safety programs and practices to ensure that those implemented are the best possible for the offshore environment."

PAUL BARNES, CAPP's Manager,
Atlantic Canada

The HUEBA has been integrated into existing helicopter flight suits in Atlantic Canada. Offshore workers are receiving extensive training about the device in a classroom setting and through

in-water training. Training is also reviewed during check-in at the heliport prior to offshore flights.

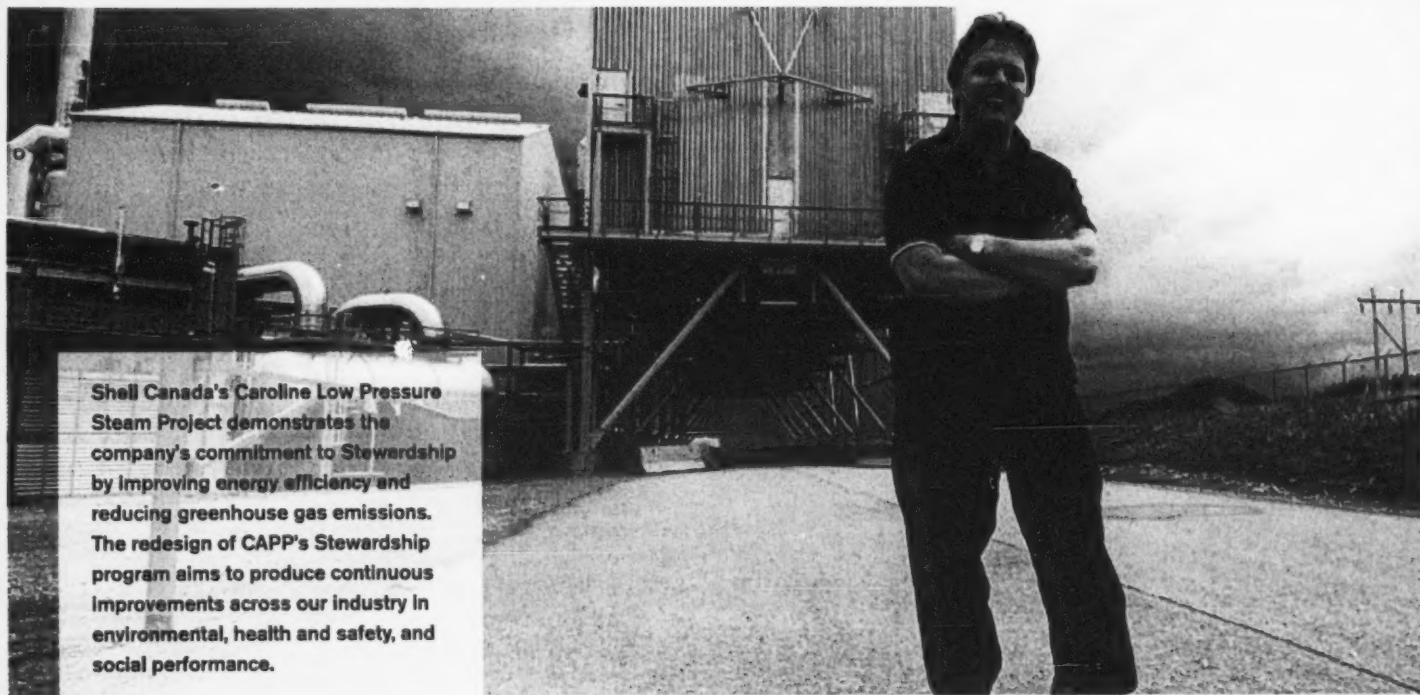
The implementation of the HUEBA is the result of a multi-year effort by a number of individuals and organizations. A CAPP task force comprised of member company representatives started reviewing HUEBA and other devices several years ago. In choosing the HUEBA, the industry and the Offshore Petroleum Boards in Nova Scotia and Newfoundland & Labrador undertook an extensive review, which included examining other types of emergency breathing systems used in other jurisdictions. The HUEBA technology was chosen as the most appropriate breathing system for Canada's unique offshore operating environment. ■

- Learn more about [HUEBA](#)
- Learn more about [how the industry works to keep employees safe](#)



CAPP is on Twitter.
Follow us [@OilGasCanada](#).





Shell Canada's Caroline Low Pressure Steam Project demonstrates the company's commitment to Stewardship by improving energy efficiency and reducing greenhouse gas emissions. The redesign of CAPP's Stewardship program aims to produce continuous improvements across our industry in environmental, health and safety, and social performance.

Stewardship

Program redesign moves forward

Canadians hold ever-higher expectations on the responsible development of our nation's resources. To help meet these expectations, CAPP has initiated a redesign of the Stewardship program to ensure that it remains an effective tool for improving our performance on environmental, health and safety, and social issues.

CAPP's Board of Directors have approved the redesigned Stewardship Vision and Principles, [◆ sidebar] which were announced in the last issue of *Upstream Dialogue*. Based on the Vision and Principles, five Standards of Practice have been created to provide a consistent framework for CAPP member companies to gauge and manage key issues. The five Standards of Practice are: Air and Energy Management; Water Management; Ecosystem/Biodiversity Management; Safety and Well-being; and Stakeholder Engagement.

"These are the issues that are of significant concern for Canadians," said Tom Huffaker, CAPP Vice President of Policy and Environment. "The Standards of Practice will assist companies in managing and ultimately improving their performance on these key fronts."

Each Standard of Practice is comprised of a number of components. For example, the Safety and Well-being Standard is broken down into Training and Competency, Fit for Duty, Contractor Management, Journey Management, and Emergency Preparedness and Response.

Up to 20 CAPP producer member companies, representing a broad cross section of production levels, will pilot test the Standards of Practice beginning in mid-September through October. CAPP is also engaging subject matter experts from outside of our industry to provide input on the Standards. This testing and feedback will ensure the Standards are sufficiently relevant, effective and manageable.

"Canadians are looking to our industry to raise the bar in our operations," said Tom. "The redesign of Stewardship will demonstrate our leadership, and ensure that Stewardship continues to meet its objective of continuous improvement." ■

If you have any questions about CAPP's redesign of the Stewardship program, contact Andrea Dube at 403 267-1118 or at andrea.dube@capp.ca.

Updated Vision & Principles

We will conduct our business activities in a safe and sustainable manner, balancing social, economic and environmental considerations.

We will hold each other accountable and measure ourselves against the following principles:

- ▶ Provide a safe and healthy workplace for our employees, contractors and for the communities in which we work, with a goal to do no harm.
- ▶ Conduct our activities in an environmentally responsible manner.
- ▶ Engage our stakeholders in open and responsive communications.
- ▶ Create opportunities for economic and social benefits in the communities in which we operate, at a local and national level.
- ▶ Conduct our business activities with integrity, ensuring all people are treated with dignity, fairness and respect.



Employee Perspectives

Faster Forests



Name: Garrett Brown

Title: Environment and Regulatory Coordinator

Company: ConocoPhillips Canada

Years of Experience: 13

Location: Calgary, Alberta

Best part of the job: "I work for a company that values doing the right thing. It's very rewarding to know the company I work for considers the business aspects in balance with environmental and social considerations."

Garrett Brown can see the forests, and the trees. He is an Environment and Regulatory Coordinator at ConocoPhillips Canada.

Part of Garrett's work with the company's Oil Sands Development Teams includes advising them on regulatory requirements and helping prepare environmental and regulatory applications. He also works with the company's construction and reclamation teams to better understand how to minimize the impact on the natural environment.

Garrett is working on an innovative new reclamation program called *Faster Forests* that's aimed at reducing the company's environmental footprint by accelerating reforestation of oil sands leases. "We believe *Faster Forests* has the potential to restore the forest more quickly than it would otherwise be restored, while exceeding regulatory expectations," he says.

Standard reclamation programs for exploratory wellsites usually involve using natural restoration methods allowing native vegetation to re-establish itself, or planting a mix of native grass seeds and letting trees come along naturally. Both processes can take many years to re-establish.

Faster Forests will speed things up by planting three species of trees seedlings; spruce, birch and aspen. The seedlings have a 10cm "plug" of soil and established roots as well as a 20cm tree stem. The program is based on recommendations from a long-term study on reclamation from the University of Alberta. The first seedlings hit the ground in the summer of 2009, with 30,000 trees expected to be planted by the end of the year.

As the program develops, ConocoPhillips is realizing several other ways to expand the benefits. "*Faster Forests* is about more than just planting trees," says Garrett. "We plan to evolve the program to include other types of vegetation, involve local First Nations, and leverage best practices to create healthy forest ecosystems and reduce the footprint of our oil sands projects."

Garrett also finds satisfaction in his job because he knows he and the company are doing the right thing. "People have always expected sound environmental performance from companies in the oil and gas industry, but this is increasingly becoming more a part of our social license to operate," he says. "People

"Air, land and water issues are evolving at a very fast pace. Regulators and stakeholders expect us to develop solutions as we develop our oil sands projects."

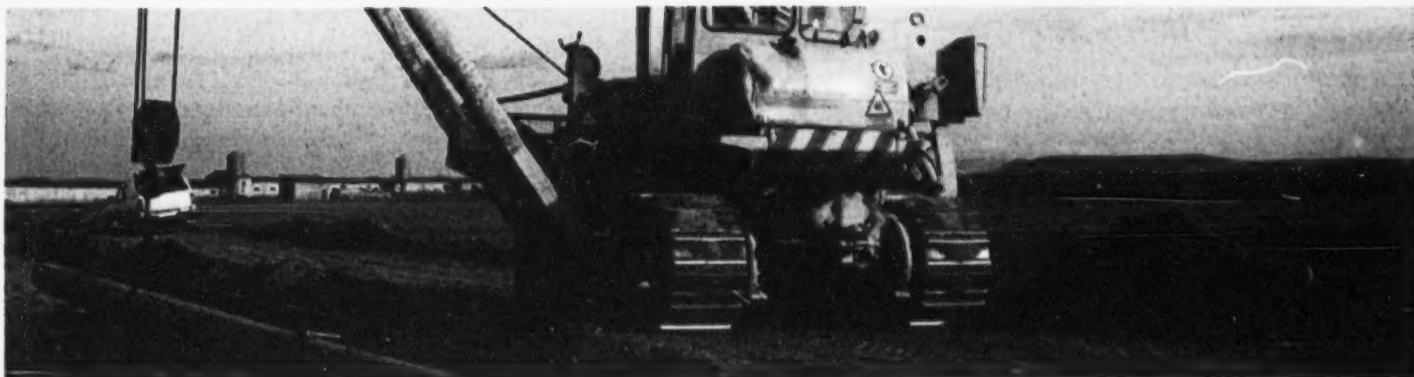
- GARRETT BROWN (shown here on the right)

don't want to work for, or do business with, companies that refuse to consider environmental and social issues in their day-to-day business."

"Many other companies are attempting to accelerate reclamation and if best practices can be shared and adopted then the whole industry will benefit," said Garrett. ConocoPhillips collaborates with several other producers on better reclamation practices, improved site construction, and other ways to develop more sustainable operations. ■

► Learn more about [Faster Forests](#)





New and updated pipeline corrosion mitigation guides

Internal and external corrosion continues to be the main causes of pipeline leaks and failures in Canada.

In response, the CAPP Pipeline Technical Committee has created five best management practices publications that address the mitigation of corrosion on different pipeline systems.

Following best practices can help upstream oil and gas producers recognize the conditions that contribute to pipeline corrosion incidents, and identify effective measures to reduce the likelihood of corrosion incidents. These measures can be integrated into pipeline integrity management programs to assist in improving and maintaining the mechanical integrity of upstream pipelines.

These documents are intended for use by corrosion specialists involved with the development and execution of corrosion mitigation programs, engineering teams involved in the design of gathering systems, and operations personnel involved with the implementation of corrosion mitigation programs.

► Read the best management practices publications:

- [Mitigation of Internal Corrosion in Oilfield Water Pipeline Systems](#)
- [Mitigation of Internal Corrosion in Oil Effluent Pipeline Systems](#)
- [Mitigation of Internal Corrosion in Sour Gas Gathering Systems](#)
- [Mitigation of Internal Corrosion in Sweet Gas Gathering Systems](#)
- [Mitigation of External Corrosion on Buried Pipeline Systems](#)

Industry Practice and Regulations



Helicopter safety inquiry

The initial hearings for the inquiry into offshore helicopter passenger safety began on August 11, 2009 in St. John's Newfoundland and Labrador.

The inquiry was established by the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) to determine and recommend improvements to the offshore safety regime. The intent is to ensure the risks of helicopter transportation for offshore workers are as low as reasonably practicable. The inquiry was established following the tragic helicopter incident offshore Newfoundland and Labrador on March 12, 2009, where 17 people lost their lives.

During the initial hearing, individuals and companies requested to be parties to the inquiry. The inquiry is scheduled to recommence in October 2009. CAPP is expecting to play a role in the inquiry.

► Learn more about the [inquiry for offshore helicopter safety](#)

Alberta gas transportation tolls

An agreement has been reached on significant changes to the way NOVA Gas Transmission (NGTL) charges for its services. NGTL operates the main natural gas transmission pipeline in Alberta and moves over 11 Bcf of gas every day.

At the request of the Alberta Energy and Utilities Board (NGTL's regulator at the time the review commenced), NGTL and its stakeholders undertook an extensive review of toll design. The change addresses some gas shippers' concerns that the toll for delivering gas inside of Alberta was not sufficient to cover costs.

The agreement and the revised tariff will be submitted to NGTL's regulator, the National Energy Board, for approval.

► Learn more about [changes to Alberta gas transportation tolls](#)

► Learn more about [how natural gas is transported in Alberta](#)



Canadian Association of Petroleum Producers (CAPP)

The Canadian Association of Petroleum Producers (CAPP) represents 130 companies that explore for, develop and produce natural gas, natural gas liquids, crude oil, oil sands, and elemental sulphur throughout Canada. CAPP member companies produce more than 90 per cent of Canada's natural gas and crude oil. CAPP also has 150 associate members that provide a wide range of services that support the upstream crude oil and natural gas industry. Together, these members and associate members are an important part of a \$120-billion-a-year national industry that affects the livelihoods of more than half a million Canadians.

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email your request
to communication@capp.ca.



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Follow us [@OilGasCanada](https://twitter.com/OilGasCanada).

TELL US YOUR SUCCESS STORY

We are looking for employee
stories to publish in our
Employee Perspectives section.

If you know of a CAPP member company
employee who has taken a leading role
in an innovative company project, they
may be eligible for feature in Upstream
Dialogue. Please submit a brief bio, any
existing published stories, and appropriate
contact details about the employee to
communication@capp.ca.

FEEDBACK

Your feedback, questions and/or
comments are always welcome. Your input
is important as we work to provide you
with information about Canada's oil and
gas industry.

► Send us your [feedback](#)

